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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,282	09/28/2004	Joachim Neumann		3694

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EXAMINER	
BRINEY III, WALTER F	

ART UNIT	PAPER NUMBER
2615	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/509,282	NEUMANN, JOACHIM	
	Examiner	Art Unit	
	Walter F. Briney III	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-7* is/are rejected.

7)☒ Claim(s) *3 and 4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/16/2005 and 9/28/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 16 June 2005 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

The information disclosure statement filed 28 September 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information related to document numbers 19534756 and 6164277 referred to therein has not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1, 2, 5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Waller, JR. (US Patent Application Publication 2002/0154786 A1).**

Claim 1 is limited to a "method for dynamic determination of time constants to be used in a detection of the signal level of an input signal of unknown level in an electric circuit." In rejecting this claim reference is made to US Patent Application Publication 2002/0154786 A1 (herein Waller). Waller discloses an audio dynamics processing control system that includes circuitry for determining and adjusting a time constant used by a second, slow level detector. See paragraph [0002]. The operation of the embodiment depicted in figure 5 will now be reviewed against the scope of the claim.

An input signal is received at node 10 in figure 5. The input signal is fed "through an auxiliary level detection means (20, 21, 22) that is reacting faster to changes in the input sound signal level than the detection of the signal level as a whole." See paragraph [0014], lines 62-68; note that descriptions of figure 4 apply to the like portions of figure 5. See paragraph [0015], lines 1-14. The initial level detection result generated by elements 20-22 is passed to "a guided level detection means (24, 30, 90)." As seen in the figure, differential amplifier 120 controls the time constant at which the level estimate output of buffer 90 updates. See paragraph [0014], lines 51-115. Amplifier 120 analyzes "the outputs of the auxiliary and the guided level detector means" by subtracting them and "determines the time constant of the guided level detection means based on this analysis" by adjusting the clamping elements 170 and

180. In this way, the guided level detection means (24, 30, 90) "is arranged with a guided time constant." Therefore, Waller anticipates all limitations of the claim.

Claim 2 is limited to the "method as claimed in claim 1," as covered by Waller. As noted in the rejection of claim 1, "the time constant of the auxiliary level detector is... substantially smaller than the time constant of the level detector as a whole." See paragraph [0014], lines 64-66. Moreover, it is constant, as evidenced by the lack of any clamping circuitry at the output of elements 20-22. Therefore, Waller anticipates all limitations of the claim.

Claim 5 is limited to a "method for level detection." This claim depends from claim 1 in that it generates a time constant according to the method recited in claim 1. Moreover, the claim uses the generated time constant for level detection. Waller discloses said level detection where amplifier 120 generates a time constant through the aid of clamping circuitry 170 and 180 and uses the resulting time constant to generate a level detection 60. See paragraph [0014]. Therefore, Waller anticipates all limitations of the claim.

Claim 7 is limited to a "method for compressing an electric audio signal." This claim depends on claim 5 in that it compresses a signal using the level detected according to the method recited in claim 5. Waller discloses that the output control signal 60 is used for "compressing an electric audio signal." See paragraph [0015], lines 68-72. Therefore, Waller anticipates all limitations of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Waller in view of Armstrong (US Patent Application Publication 2003/0012392 A1).**

Claim 6 is limited to the "method for level detection as claimed in claim 5," as covered by Waller. In treating this claim reference is made to US Patent Application Publication 2003/0012392 A1 (herein Armstrong). While Waller discloses an audio dynamics processing control system with a single cascaded level detector serving as a "fast level detector," Waller fails to disclose, teach or suggest the use of a "traditional slow level estimator" that is used "in parallel" with the fast detector. However, this deficiency is overcome by an obvious combination.

Armstrong teaches an inter-channel communication in a multi-channel digital hearing instrument. The hearing instrument comprises twin detectors in each of at least four channel processing blocks as seen in figure 1B. The twin detectors comprise a fast and slow level detector, and the maximum value from the fast and slow level detectors is output as the signal level. See paragraph [0029]. Of particular note is that a value of 6dB is removed from the output of the slow level detector, which corresponds to the limitation "whereby an offset value is subtracted [from] this long term average level to define a noise offset level." In terms of combining Waller and Armstrong, it is noted that the construction of the detectors employed in the hearing instrument of Armstrong are

not specified, which requires one of ordinary skill in the art to choose an appropriate level detector. It is submitted that Waller fills this function most advantageously by providing continuously variable attack and release times. See paragraph [0001] of Waller.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the level detectors of Armstrong with the variable time constant level detectors taught by Waller because (1) Armstrong does not disclose their construction and (2) because the variable time constants provide improved level matching without prior art defects, such as "pumping."

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3 is limited to the "method as claimed in claim 1," as covered by Waller. Waller discloses converting the input signal from a linear domain to a logarithmic domain before level detection, determining the level difference between the output of an auxiliary level detector and a guided level detector and determining the time constant of the guided level detector as a function of this level difference. The foregoing illustrates the difference between the prior art and the claimed invention; namely, the prior art

converts an input signal and then estimates its level, whereas the claimed invention "converts the amplitude estimate of both level detectors to a level estimate on a dB scale." The difference is simply not taught in the cited prior art in a way that would lead one of ordinary skill in the art to the claimed invention.

Claim 4 is limited to the "method as claimed in claim 3," as covered by Waller, and is allowable over the cited prior art for at least the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wfb
5/11/07

SINH TRAN
SUPERVISORY PATENT EXAMINER